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## PATENT COOPERATION TREATY

## PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference NFC1P001.WO	FOR FURTHER ACTION	see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.
International application No. PCT/US99/24137	International filing date (day/month/year) 15 OCTOBER 1999	(Earliest) Priority Date (day/month/year) 16 OCTOBER 1998
Applicant NEW FOCUS, INC.		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 3 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. ☐ Certain claims were found unsearchable (See Box I).

2. ☐ Unity of invention is lacking (See Box II).

3. ☐ The international application contains disclosure of a nucleotide and/or amino acid sequence listing and the international search was carried out on the basis of the sequence listing

☐

filed with the international application.

☐

furnished by the applicant separately from the international application,

☐

but not accompanied by a statement to the effect that it did not include matter going beyond the disclosure in the international application as filed.

☐

transcribed by this Authority.

4. With regard to the title,

☒

the text is approved as submitted by the applicant.

☐

the text has been established by this Authority to read as follows:

5. With regard to the abstract,

☐

the text is approved as submitted by the applicant.

☒

the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the drawings to be published with the abstract is:

Figure No. 10A

☐

as suggested by the applicant.

☒

because the applicant failed to suggest a figure.

☐

because this figure better characterizes the invention.

☐

None of the figures.

**Box III TEXT OF THE ABSTRACT (Continuation of item 5 of the first sheet)**

The present invention provides a continuously-tunable external cavity laser (ECL) with a compact form factor and precise tuning. A novel interference filter which may be used to tune the ECL provides an absence of mode-hopping and reduce feedback from both spurious interference(210) and reflections(214) in the external cavity. A novel tuning mechanism is disclosed which provides for mechanical FM tuning of a wide range ECL tuning elements such as an interference filter, a diffraction element and a retroreflector(122). A novel feedback circuit is disclosed which provides closed loop feedback for selecting output wavelength in a laser.

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/US99/24137

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(6) :HOIS 3/10

US CL :372/20,19,99,9,10,,37,38,8,98,33,102,107

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 372/20,19,99,9,10,,37,38,8,98,33,102,107

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched  
NONEElectronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
NONE

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5,321,717 A [Adachi et al] 14 June 1994, (14/06/94) see entire document.	1-35
A	US 5,103,457 A [Wakkace et al] 07 April 1992 (07/04/92) see entire document.	1-3,53-15,17 and 18
A	US 5,412,474 A [Reasenberg et al] 02 May 1995 (02/05/95) see entire document.	1,3,5,8-10, and 12-20

☐ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

* Special categories of cited documents:	*T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
*A* document defining the general state of the art which is not considered to be of particular relevance	*X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
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*L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	*Z* document member of the same patent family
*O* document referring to an oral disclosure, use, exhibition or other means	
*P* document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search

04 DECEMBER 1999

Date of mailing of the international search report

27 JAN 2000

Name and mailing address of the ISA/US  
Commissioner of Patents and Trademarks  
Box PCT  
Washington, D.C. 20231

Facsimile No. (703) 305-3230

Authorized officer

LEON SCOTT JR.

Telephone No. (703) 308-4884